



Notification of Hazardous Waste Site

United States
Environmental Protection
Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810609

PA 558
PAS-000-001-122

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name FMC Corporation
Street 2000 Market Street
City Philadelphia State PA Zip Code 19103

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site Mifflin County Industrial Park
Street Belle Avenue
City Lewistown County Mifflin State PA Zip Code 17044

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title) ELPHICK, N.C. - Director Environmental Planning
Phone (215) 299-6316

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year) 1963* To (Year) 1972

*FMC acquired this site in 1966.

E Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:

Place an X in the appropriate boxes. The categories listed below. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☒ Heavy metals
6. ☒ Acids
7. ☒ Bases
8. ☐ PCBs
9. ☒ Mixed Municipal Waste
10. ☐ Unknown
11. ☒ Other (Specify)
Misc. wastes from
manufacture of
cellulosic fibers

Source of Waste:

Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☒ Other (Specify)
Mfg. cellulosic
fibers.

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:

EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

F Waste Quantity: Place an X in the appropriate boxes to indicate the facility types found at the site. In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons. In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.	Facility Type 1. <input type="checkbox"/> Piles 2. <input type="checkbox"/> Land Treatment 3. <input type="checkbox"/> Landfill 4. <input type="checkbox"/> Tanks 5. <input checked="" type="checkbox"/> Impoundment 6. <input type="checkbox"/> Underground Injection 7. <input type="checkbox"/> Drums, Above Ground 8. <input type="checkbox"/> Drums, Below Ground 9. <input type="checkbox"/> Other (Specify) _____	Total Facility Waste Amount cubic feet <u>unknown</u> gallons <u>unknown</u> Total Facility Area square feet <u>unknown</u> acres <u>unknown</u>
--	--	---

G Known, Suspected or Likely Releases to the Environment:
Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment. ☐ Known ☒ Suspected ☐ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

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J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name N. C. Elphick, Director Environmental Planning
Street 2000 Market Street
City Philadelphia State PA Zip Code 19103
Signature _____ Date _____

- ☐ Owner, Present
☒ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

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R-585-9-4-9
SITE INSPECTION OF
AMERICAN VISCOS/FMC CORPORATION
PREPARED UNDER

TDD NO. F3-8405-23
EPA NO. PA-730
CONTRACT NO. 68-01-6699

FOR THE
HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 17, 1985

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

REVIEWED BY

APPROVED BY

William Wentworth for
ANDREW FREBOWITZ
ENVIRON. ENGINEER

William Wentworth
WILLIAM WENTWORTH
ASSISTANT MANAGER

William Wentworth for
GARTH GLENN
MANAGER, FIT III

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SECTION 1

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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-6699. This specific report was prepared in accordance with Technical Directive Document No. F3-8405-23 for the American Viscos/FMC Corporation located in Lewistown, Pennsylvania.

1.2 Scope of Work

NUS FIT III was tasked to conduct a site inspection of the American Viscos/FMC Corporation.

1.3 Summary

FIT III conducted an inspection of the American Viscos/FMC site on June 12, 1984. The site, which is in the flood plain of the Juniata River, is approximately 5 acres in size and consists of 4 sludge storage basins, 4 sludge settling basins, and a mill race pit for sludge intake. The plant area is located adjacent to the subject site. The site has been inactive since the Hurricane Agnes flood of 1972. The site was owned by the American Viscos, Incorporated and used for the treatment of rayon manufacturing wastes. In the late 1950s, American Viscos was purchased by FMC Corporation and operations continued until 1972. The site is now owned by the Mifflin County Industrial Development Authority (MCIDA). State officials had sampled the site prior to the FIT III site inspection. Their results indicated heavy metal contamination as well as the possible presence of solvents in the mill race pit intake chamber. The major routes of concern at the site are groundwater and surface water contamination and direct contact threats. In October 1982, an 18-month-old girl drowned in 1 of the sludge storage basins. FIT III collected samples from the mill race pit, sludge settling basins, and sludge storage basins. The mill race pit and settling basins are concrete lined. The storage basins are unlined. A total of 8 sediment and 6 aqueous samples were taken.

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Elevated levels of metals and solvents were found in samples collected by the FIT, confirming the Pennsylvania Department of Environmental Resources (PA DER) results. Elevated metal levels were also found in the sludge basins.

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SECTION 2

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2.0 THE SITE

2.1 Location

The site is located in the city of Lewistown and is bordered by the Juniata River on the north and east. The site is located in the flood plain of the river. The MCIDA complex is west of the site. A railroad and unused wooded land are south of the site.

2.2 Site Layout

The site occupies approximately 5 acres. When the facility was operating, a mill race pit fed into 4 concrete-lined, sludge settling basins. The sludge was then pumped into 4 large, unlined storage basins which take up about 80 percent of the site area. The liquid fraction of the waste was also pumped into the 4 storage basins. The site held no NPDES permits for discharge into the Juniata River, which borders the sludge storage basins to the north and east.

2.3 Ownership History

The site is currently owned by the MCIDA. The MCIDA acquired the property from the FMC Corporation, the parent company of American Viscos, Incorporated, in the late 1970s. American Viscos, Incorporated owned the site from the 1940s until the acquisition by MCIDA.

2.4 Site Use History

The site was used for the treatment and storage of sludge derived from rayon manufacturing processes from the 1940s until 1972 when it was flooded during Hurricane Agnes. The site has remained inactive since that time.

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2.5 Permit and Regulatory Action History

No known permits were ever held by American Viscos/FMC Corporation. PA DER inspected the site and sampled the mill race pit in March 1984. No other regulatory action has taken place at the site.

2.6 Remedial Action To Date

No remedial action has taken place at the site.

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SECTION 3

3.2 Surface Waters

The site lies in the 100-year flood plain of the Juniata River which borders the site on the northern and eastern sides. The Juniata River is used for recreational purposes. Ponded water is also present in the sludge storage basins.

3.3 Geology and Soils

The American Viscos/FMC Corporation site is located in the Valley and Ridge physiographic province of the Appalachian Highlands. The major structural features in the area are northeast-southwest oriented folds with axes trending N 55° to 65° E. The site is underlain by carbonate rocks of Devonian and Silurian age.

The site is underlain by the undifferentiated Keyser and Tonoloway Formations of the Cayuga Group. These formations form a continuous limestone layer up to 800 feet thick in some areas. They consist of limestone, argillaceous limestone, and some interbedded shale. The Keyser and Tonoloway Formations are underlain by the Wills Creek Formation. This formation, which is 400 to 500 feet thick, consists of thin fissile calcareous gray shale with thin layers of limestone near the base. The Keyser and Tonoloway Formations are overlain by the undifferentiated Onondaga and Old Port Formations, which subcrop north of the site.

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According to the Soil Survey of Mifflin County, the soil on site is the Ashton silt loam. "Ashton - silt loam is nearly level to gently sloping, deep well drained soil on low stream terraces. In a typical profile the surface layer is very dark grayish brown silt loam, about 9 inches thick. The subsoil extends to a depth of 43 inches. The substratum to a depth of 60 inches is brown, very friable fine sandy loam. The very rapid permeability of the substratum may allow contamination of groundwater to occur if areas covered by this soil are used for on-site waste disposal."

3.4 Groundwaters

Wells are numerous in the area and produce from several formations depending on which underlies a specific well site. Of the 33 wells identified by the PA DER Water Inventory System, in the 3-mile radius of the site, 14 draw from the Keyser Formation and 1 draws from the Tonoloway Formation (see appendix E).

The Tonoloway Formation is recognized as being one of the most important aquifers in the area. Groundwater in carbonate rocks occurs almost entirely within bedding planes, joints, faults, and other fractures that have been enlarged by solution. The number and size of the solution channels determines the ability of the rock to transmit water. Since groundwater flow is restricted to fractures in the Keyser-Tonoloway Formation, there is probably little, if any, hydraulic connection between it and the underlying Wills Creek shale.

Wells in the Keyser-Tonoloway Formation range in depth from 60 to 351 feet, with yields averaging 15 to 25 gallons per minute (gpm). Well no. 177, 1/2 mile southwest of the site, is drilled to 60 feet (see map, appendix E). The Keyser-Tonoloway Formation was encountered at 15 feet below the surface with the first major aquifer 31 to 37 feet below grade. Subsurface geology at the site is expected to be similar to that at well no. 177.

Locally, groundwater flow is expected to be east toward the Juniata River. Regionally, groundwater flow is also probably east toward the river.

3.5 Climate and Meteorology

According to the National Oceanic and Atmospheric Administration, the yearly average daily temperature for the Lewistown area ranges from a minimum of 40.2°F to a maximum of 62.8°F. The coldest month is January with average lows of 20.5°F and average highs of 37.8°F. The warmest month is July with an average daily range of 60.8°F to 86.2°F.

3.6 Land Use

Undeveloped river banks are located to the north and east of the site. A railroad spur and wooded area lies to the south. The MCIDA Plaza, an industrial park, and commercial and residential areas are situated to the west of the site. Tenants of the MCIDA Plaza are Avtex, Chromalloy Incorporated, and Cyclops Book Binding, which may be sources of solvents.

3.7 Population Distribution

The majority of the nearby population lives in the city of Lewistown. The estimated population within a 1-mile radius of the site is 9,334, 10,961 within a 2-mile radius, and 12,611 within a 3-mile radius. Population is based on a house count using United States Geological Survey (U.S.G.S.) topographic maps for the Lewistown, Burnham, and Alfarata quadrangles.

3.8 Critical Environments

There are no known critical habitats or endangered species identified by the Fisheries and Wildlife Service in the vicinity of the site.

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SECTION 4

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4.0 WASTE TYPES AND QUANTITIES

The site was used for the treatment and disposal of sludge generated in the rayon manufacturing process. No records of the waste quantities exist. The sludge storage basins are 4 to 5 acres in area; depths of the basins are unknown. Sample results reveal a high metal content in the sludge. Metals and organic solvents were detected in the mill race pit and sludge settling basins.

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SECTION 5

Site Name: American Viscos/FMC Cor
TDD No.: F3-8405-23

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5.0 FIELD TRIP REPORT

5.1 Summary

On June 12, 1984, FIT III members Andrew Frebowitz, David Walker, James Strickland, Charles Meyer, and Mark Volatile performed a site inspection at the American Viscos/FMC Corporation in Lewistown, Pennsylvania. The weather at the time of the site inspection was sunny and warm with temperatures in the mid-80s. Access to the site was granted by Robert Postal, the executive director of the MCIDA Plaza.

FIT III collected 8 sediment and 6 aqueous samples from the mill race pit, sludge settling basins and sludge storage basins. There are no monitoring wells on site.

TDD Number F3-8405-23
EPA Number PA 730

5.3 SAMPLE LOG

Site Name AMERICAN VISCOS/FMC CORP.

TRAFFIC REPORTS			SAMPLING LOCATION	PHASE	SAMPLE DESCRIPTION	DATE	TIME	pH	COMMENTS/OBSERVATIONS	LABORATORY
Organic	Inorganic	High Hazard								
C 7057	me 3952		MILL RACE PIT A	SED.	sediment	6/12/84	1000		DUPLICATE	ORG. ETC. INOR. US TEST.
C 7058	me 3953		MILL RACE PIT B	SED.	sediment	6/12/84	1000		DUPLICATE	
C 7059	me 3954		SETTLING BASIN 2	↓	↓		1045			
C 7060	me 3955		SETTLING BASIN 3				1050			
C 7061	me 3956		STORAGE BASIN 1				0955			
C 7062	me 3957		STORAGE BASIN 2				1030			
C 4464	me 3958		STORAGE BASIN 3				1045			
C 7023	me 3959		STORAGE BASIN 4	↓	AUGER		1020			
C 7024	me 4078		BLANK		BLANK SOLID		0900			↓
C 7028	me 3946		MILL RACE PIT A	AQ	surface water	6/12/84	1000	6.9	DUPLICATE	ORG. ETC. INOR. US TEST.
C 7029	me 3947		SETTLING BASIN 2	↓	↓		1045	8.45		
C 7030	me 3948		SETTLING BASIN 3				1050	7.22		
C 7032	me 3949		MILL RACE PIT B				1000	6.9	DUPLICATE	
C 7055	me 3950		STORAGE BASIN 1				0955	7.02		
C 7033	me 3951		STORAGE BASIN 2				1030	6.71		
C 7056	me 4074		BLANK	↓	BLANK AQUEOUS		0900	6.7		↓

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5.4 Site Observations

- o No HNU or mini-alert readings above background were noted.
- o Solvent odors emanating from the mill race pit and sludge settling basins were noted by FIT members.
- o The water in the mill race pit, sludge settling basins (nos. 1 through 4), and the sludge storage basin no. 2 was black/dark green in color.
- o The sludge storage basin nos. 3 and 4 were almost completely dry. Some ponded water was present in these basins.
- o Sludge storage basin no. 1 had clear water.
- o Flora and fauna were present in the sludge storage basins.

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F3-8405-23

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 730

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) American Viscos/FMC Corporation		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER Rear Bell Avenue (MCIDC Plaza)			
03 CITY Lewistown	04 STATE PA	05 ZIP CODE 17044	06 COUNTY Mifflin	07 COUNTY CODE 087	08 CONG DIST 09
09 COORDINATES LATITUDE 40 35 30 LONGITUDE 77 35 00		10 TYPE OF OWNERSHIP (Check one) <input type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input checked="" type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN			

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 6 / 12 / 84 MONTH DAY YEAR	02 SITE STATUS <input type="checkbox"/> ACTIVE <input checked="" type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1940s 1972 BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR NUS <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <input type="checkbox"/> E. STATE <input type="checkbox"/> F. STATE CONTRACTOR <input type="checkbox"/> G. OTHER (Name of firm) (Specify)			

05 CHIEF INSPECTOR [REDACTED]	06 TITLE [REDACTED]	07 ORGANIZATION [REDACTED]	08 TELEPHONE NO [REDACTED]
09 OTHER INSPECTORS [REDACTED]	10 [REDACTED]	11 ORGANIZATION [REDACTED]	12 TELEPHONE NO [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

13 SITE REPRESENTATIVES INTERVIEWED Robert Postal	14 TITLE Exec. Director	15 ADDRESS MCIDC Plaza Lewistown, PA 17044	16 TELEPHONE NO 717 241-0393
John Irwin	Site Engineer	401 Logan Street Lewistown, PA 17044	717 248-8840
			()
			()
			()
			()
			()

17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 8:30	19 WEATHER CONDITIONS Sunny, Warm, 80°F.
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IV. INFORMATION AVAILABLE FROM

01 CONTACT Neil Swanson	02 OF (Agency/Organization) EPA	03 TELEPHONE NO. 215 597-3437		
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM [REDACTED]	05 AGENCY [REDACTED]	06 ORGANIZATION [REDACTED]	07 TELEPHONE NO. [REDACTED]	08 DATE [REDACTED]

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**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION**

I. IDENTIFICATION

01 STATE PA	02 SITE NUMBER 730
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II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS**01 PHYSICAL STATES** (Check all that apply)

- ☐ A. SOLID
☐ B. POWDER, FINES
☒ C. SLUDGE
☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
☒ F. LIQUID
☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS _____

CUBIC YARDS Unknown

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> A. TOXIC | <input type="checkbox"/> E. SOLUBLE | <input type="checkbox"/> I. HIGHLY VOLATILE |
| <input type="checkbox"/> B. CORROSIVE | <input type="checkbox"/> F. INFECTIOUS | <input type="checkbox"/> J. EXPLOSIVE |
| <input type="checkbox"/> C. RADIOACTIVE | <input type="checkbox"/> G. FLAMMABLE | <input type="checkbox"/> K. REACTIVE |
| <input checked="" type="checkbox"/> D. PERSISTENT | <input type="checkbox"/> H. IGNITABLE | <input type="checkbox"/> L. INCOMPATIBLE |
| | | <input type="checkbox"/> M. NOT APPLICABLE |

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown		
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		
IOC	INORGANIC CHEMICALS	Unknown		
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
IOC	Arsenic	7440-36-0	Sludge storage basin	54	mg/l
MES	Barium		" " "	1150	mg/kg
MES	Cadmium	7440-43-9	" " "	21	ug/l
MES	Chromium	7440-47-3	" " "	31.4	mg/kg
MES	Lead	7439-92-1	" " "	485	mg/kg
MES	Mercury	7439-97-6	" " "	1.6	ug/l
IOC	Cyanide	5212-5	Mill Race Pit	3.5	mg/kg
SOL	Benzene	71-43-2	" " "	111	ug/kg
SOL	Toluene	108-88-3	" " "	9970	ug/kg
SOL	Ethylbenzene	100-41-4	" " "	273	ug/kg
SOL	Tetrachloroethene	127-18-4	" " "	11	ug/kg
SOL	Trichloroethene	79-01-6	" " "	10	ug/kg
SOL	Total Xylenes	1330-20-7	" " "	1180	ug/kg
OCC	Carbon Disulfide	75-15-0	Sludge Settling Basin	152	ug/l
OCC	Pentachlorophenol	87-86-5	Mill Race Pit	35955	ug/kg
OCC	Napthalene	91-59-5	" " "	4493	ug/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT III Sample Data



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 730

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II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

Sludge storage basins are unlined; contaminants may migrate to groundwater.

01 ☒ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

Site is in floodplain of Juniata River; contaminants were detected in ponded water of sludge storage basins.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

N/A

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

N/A

01 ☒ E. DIRECT CONTACT 02 ☒ OBSERVED (DATE: 11/82) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9334 within 1 mi. of site 04 NARRATIVE DESCRIPTION

An 18 month old child drowned in 1 of the lagoons.

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION

Contaminants from site may be deposited on the river bank during flooding conditions.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

N/A

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

N/A

ORIGINAL
(Red)



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 730

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills, Runoff, Standing liquids, Leaking drums)
03 POPULATION POTENTIALLY AFFECTED: Unknown

02 ☒ OBSERVED (DATE: 6/12/84)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Ponded water was observed in sludge storage basins.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

N/A

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☒ OBSERVED (DATE: 1981)

☒ POTENTIAL

☐ ALLEGED

A spill of solvents from the MCIDA complex occurred in 1981; a potential for illegal discharges into the mill race pit also exists.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 9492

IV. COMMENTS

N/A

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS, FIT III, Site Inspection, 6/12/84.
PA DER Preliminary Assessment, 7/25/83.
PA DER, Waste Discharge Inspection Report, 3/8/84.

ORIGINAL
(Red)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☒ C. 10^{-4} - 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE
(Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE
(10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE
(10^{-2} - 10^{-4} cm/sec) ☐ D. VERY PERMEABLE
(Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

21 to 118 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

N/A (ft)

05 SOIL pH

5.6-7.3

06 NET PRECIPITATION

8 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.5 (in)

08 SLOPE

SITE SLOPE

0.3 %

DIRECTION OF SITE SLOPE

N/A

TERRAIN AVERAGE SLOPE

0.3 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

A. N/A (mi)

OTHER

B. N/A (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

A. $< \frac{1}{4}$ (mi)RESIDENTIAL AREAS; NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVESB. $\frac{1}{4}$ (mi)AGRICULTURAL LANDS
PRIME AG LAND AG LAND

C. N/A (mi) D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is at elevation of surrounding area except for a moderate slope at Juniata River banks to north and east.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S.G.S. Lewistown Quad. Floodprone Map 2.5' series, 1974.
Soil Survey of Juniata and Mifflin counties, Pennsylvania, Soil Conservation Service, U.S. Department of Agriculture.
PA DER Groundwater Inventory System.

ORIGINAL
(Rec)



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	730

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER	6	Inorganic: U.S. Testing; Organic: E.R.G.	
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	8	Inorganic: U.S. Testing; Organic: E.T.C.	
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE Mini-Radiation Alert	02 COMMENTS No readings above background.
HNU	No readings above background.
	Background readings = 1 ppm

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF [REDACTED] (Name of organization or individual)
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS FIT III 6/12/84 site inspection report.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT III, Site Inspection, 6/12/84.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

II. CURRENT OWNER(S)				PARENT COMPANY (If applicable)			
01 NAME Mifflin County Indus. Developmental Authority		02 D+B NUMBER		08 NAME N/A		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Rear Bell Avenue		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY Lewistown		06 STATE PA	07 ZIP CODE 17044	12 CITY		13 STATE	14 ZIP CODE
01 NAME N/A		02 D+B NUMBER		08 NAME N/A		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME N/A		02 D+B NUMBER		08 NAME N/A		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME N/A		02 D+B NUMBER		08 NAME N/A		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
01 NAME N/A		02 D+B NUMBER		08 NAME N/A		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	12 CITY		13 STATE	14 ZIP CODE
III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (If applicable, list most recent first)			
01 NAME FMC Corporation		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	05 CITY		06 STATE	07 ZIP CODE
V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)							
PA DER, Preliminary Assessment, 7/25/83.							



**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION**

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (If applicable)

01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER, Preliminary Assessment, 7/25/83.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

II. ON-SITE GENERATOR

01 NAME N/A	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
05 CITY	06 STATE 07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE
01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE 07 ZIP CODE	05 CITY	06 STATE 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER, Preliminary Assessment, 7/25/83.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ D. SPILLED MATERIAL REMOVED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ E. CONTAMINATED SOIL REMOVED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ F. WASTE REPACKAGED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ H. ON SITE BURIAL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ L. ENCAPSULATION
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ M. EMERGENCY WASTE TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ N. CUTOFF WALLS
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ P. CUTOFF TRENCHES/SUMP
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 730

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ S. CAPPING/COVERING
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ V. BOTTOM SEALED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ W. GAS CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ X. FIRE CONTROL
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ Z. AREA EVACUATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE _____

03 AGENCY _____

N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA Department of Environmental Resources, Preliminary Assessment, 7/25/83.

ORIGINAL
3041



**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION**

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	730

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

PA DER inspection (March 8, 1984)
PA DER Preliminary Assessments (July 25, 1983 and December 16, 1983)
NUS FIT III Site Inspection (June 12, 1984)

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER, Preliminary Assessment, 7/25/83.

SECTION 6

ORIGINAL
(Recd)

6.0 LABORATORY DATA

6.1 Sample Data Summary

Organic and Inorganic Sample Data Summaries and Quality Assurance Reviews have been done by CRL.

TDD Number F3-2405-23
 EPA Number PA-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name American Viscose/FMC
 Date of Sample 6/12/84

				Compounds Detected														
Sample Number	Sample Description and Location	Phase	Units	methyl chloride	Acetone	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	benzene	toluene	ethyl benzene	tetrachloroethene	trichloroethene	total xylenes	carbon disulfide	chloromethane	2-hexanone (MIBK)	Remarks	
C4464	Sludge Basin #3	Solid	mg/kg	X														
C7023	Sludge Basin #4	Solid	"	X	X			98										
C7024	Field Blank	Aqueous	"	X	X	X		3.3								X		
C7057	Mill Race Pit A	Solid	"	X	X	X	3270	3200	7150	192	11.0	1010	1110					
C7058	Field Duplicate of #C7057	"	"	X	X	X	2300	111	9970	273			1180	19.2				
C7059	Settling Basin #3	"	"	X	X	X	920		133							X		
C7060	Settling Basin #3	"	"	X	X	X			308									
C7061	Sludge Basin #1	"	"	X	X													
C7062	Sludge Basin #2	"	"	X						7.6								

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

Original
 1/24/85

TDD Number F 3-7405-23
 EPA Number PA-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name American Viscose/FMC
 Date of Sample 6/12/84

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Pentachloro-phenol	Naphthalene	Bis-(2-ethylhexyl)-phthalate	di-n-butyl-phthalate	aldrin	dieldrin	heptachlor	Alpha-BHC	Beta-BHC	Remarks
C4463	Sludge Basin #3	Solid	mg/kg										
C7023	Sludge Basin #4	Solid	"										
C7024	Field Blank	Aqueous	"										
C7057	Mill Race P1A	Solid	"	20,546	11,473	18,100	10,100	10,100	10,100	10,100	10,100	10,100	
C7058	Field Duplicate of C7057	"	"	35,950	19,100	10,100	10,100	10,100	10,100	10,100	10,100	10,100	
C7059	Settling Basin #2	"	"										
C7060	Settling Basin #3	"	"										
C7061	Sludge Basin #1	"	"		10,100								
C7062	Sludge Basin #2	"	"										

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

6/12/84

TDD Number F3-2405-23
 EPA Number FR-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name American Viscose/EMC
 Date of Sample 6/12/91

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	Methylene chloride	Acetone	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	benzene	toluene	trichloroethene	trichlorofluoromethane	carbon disulfide	vinyl acetate	trans-1,3-dichloropropene	Remarks
C7028	Mill Race Pit A	AQ	15/l	2400	2400	2400	69,100	290	11						
C7029	Settling Basin #2	"	"	100	100	100		3	12						
C7030	Settling Basin #3	"	"	2400	2400	2400	25,600		X		152	5	X		
C7032	Mill Race Pit B	"	"	5100	5100	5100	261,000	820							
C7053	Sludge Basin #2	"	"	ND	ND	ND					6				
C7055	Sludge Basin #1	"	"	ND	ND	ND	ND	ND	ND		X				
C7056	Field Blank	"	"	X	ND	ND	ND			X					

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

100%
 10/15/91

TDD Number I 3-8405-23
 EPA Number PA-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name American Viscose/FMC
 Date of Sample 6/12/84

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	bis-(2-ethylhexyl) phthalate	di-n-butyl phthalate	phenol	4-methyl phenol											Remarks
C7028	Mill Race Pit A	Air	µg/l															
C7029	Settling Basin #2	"	"	ND	ND													
C7030	Settling Basin #3	"	"															
C7032	Mill Race Pit B	"	"															
C7033	Sludge Basin #1	"	"	ND	ND	15	33											
C7055	Sludge Basin #1	"	"	ND														
C7056	Field Blank	"	"	ND														

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

AMERICAN VISCOSIDE

TDD Number F3-8405-23
 EPA Number PA-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name AMERICAN VISCO'S / FINE
 Date of Sample 6-12-84

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MANGANESE	MERCURY	Remarks
MC3946	Mill Race Pit A	AQ	µg/L	610					33			3530		54	1.4		
MC3947	Settling Pond	AQ	µg/L	2120	30		138		31		274	5770	13	219	0.5		
MC3948	Settling Basin 3	AQ	µg/L	615			152		25		107	1710		150	0.4		
MC3949	Mill Race Pit B	AQ	µg/L	350					27			2170		43	0.6		
MC3950	Sludge Basin 1	AQ	µg/L	25,200		42	841	21	59		212	108,000	32.5	1710			
MC3951	Storage Basin 2	AQ	µg/L	1,400	90	54	266	13	43		137	98,200	52.5	1250	1.6		
MC4074	BLANK	AQ	µg/L	203					27			103					
MC3952		SOL	mg/kg	3930	6.8	26.3	414	1.3	7.9		2.7	2060	11,600	330	92.5	0.3	
MC3953		SOL	mg/kg	3820	6.0	20.5	1150	1.4	7.5			3000	14,100	395	121	0.75	
MC3954		SOL	mg/kg	6060	1.8	6.0	67.7	0.53	6.1	30.1	7.4	62.7	8050	300	78.6	0.45	
MC3955		SOL	mg/kg	2200	1.9	7.6	99.3		5.3	11.2		150	3610	105	87.9	0.4	
MC3956		SOL	mg/kg	1250		1.8	17.3		0.26	5.0		4.3	2600	16.5	17.8	0.5	
MC3957		SOL	mg/kg	1150	6.1	2.6	30.3		12.2	15.6		56.9	1580	485	12.2	0.3	
MC3958		SOL	mg/kg	1560		1.6	25.3		1.2	6.0	4.3	7.8	5900	41	52.3	1.05	

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

100
100000

TDD Number FS-8405-23
 EPA Number PA-780

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name American Visc / Inc
 Date of Sample 6-12-89

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	NICKEL	SELENIUM	SILVER	THALLIUM	TIN	Vanadium	ZINC	CYANIDE						Remarks
MC3946		AQ	µg/L		9.0		16	37		282							
MC3947		AQ	µg/L		13			83		4450							
MC3948		AQ	µg/L		9.3	15		64		418							
MC3949		AQ	µg/L		3.5			51		238							
MC3950		AQ	µg/L	73	6.6					9880							
MC3951		AQ	µg/L			14				3490							
MC4074	BLANK	AQ	µg/L			4				10							
MC3952		SOL	mg/kg	11.9	0.75	88.5		77		3220	3.5						
MC3953		SOL	mg/kg	11.1	1.35	42	0.8	98		2980							
MC3954		SOL	mg/kg	27.2	1.15	1.6	0.7		13.1	19440	3.25						
MC3955		SOL	mg/kg	14.2	0.2	20.8		18.5		3970							
MC3956		SOL	mg/kg	4.1		0.72				845							
MC3957		SOL	mg/kg	2.9	0.26	1.9				1720							
MC3958		SOL	mg/kg	6.8		0.66		3.8		171							

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

ORIGINAL
 (Red)

TLD Number F3-8405-23
 EPA Number PA-730

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name AMERICAN VISCOS / FINE
 Date of Sample 6-12-84

Sample Number	Sample Description and Location	Phase	Units	Compounds Detected													Remarks
				ALUMINUM	ANTHRONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON	LEAD	MANGANESE	MERCURY	
1103157		SOL	mg/kg	5080	3.9	27.5	71.1		9.4	31.4	4.1	37.5	8500	390	54.9	1.45	
1104073	GLASS	SOL	mg/kg	11.2					4.2			4.5					

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

1104073

TDD Number F3-5465-23
EPA Number PA-220

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name Andromeda Viscos / Pine
Date of Sample 6-12-89

				Compounds Detected													Remarks
Sample Number	Sample Description and Location	Phase	Units	NICKEL	SELENIUM	SILVER	THALLIUM	TIN	VANADIUM	ZINC	CYANIDE						
MC3157		SOL	mg/kg	14.8	0.18	◇ 1.1			15.2	26,400							
MC4078	GLUINR	SOL	mg/kg			0.62			1.9								

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

◇ Denotes results of questionable qualitative significance based upon quality assurance review of data.

1000
11/15/90

6.2 Quality Assurance Review

6.2.1 Organic Data: Lab Case 2907

6.2.1.1 Introduction

The findings offered in this report are based upon a general review of sixteen samples sent to two laboratories. Nine solid samples were analyzed by one laboratory and seven aqueous samples were analyzed by a second laboratory. Sample data, blank analyses, surrogate spikes, matrix spikes, duplicate analyses, target compound matching quality, BFB and DFTPP tuning performance, standards data, and tentatively identified compound results were examined in detail.

6.2.1.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- ° The following target compound results were questionable:

<u>Compound</u>	<u>Sample(s)</u>	<u>Fraction</u>
all pesticides	all sample results	Pesticide
methylene chloride	all sample results	Volatile
acetone	all sample results	Volatile
2-butanone (MEK)	all sample results	Volatile
4-methyl-2-pentanone (MIBK)	C7055, C7056	Volatile
toluene	C7030, C7055	Volatile
trichloroethene	C7028	Volatile
vinyl acetate	C7030	Volatile
trans-1,3-dichloropropene	C7030	Volatile
trichlorofluoromethane	C7056	Volatile
chloromethane	C7059	Volatile
carbon disulfide	C7055	Volatile
bis-(2-ethylhexyl)phthalate	C7029, C7033, C7055, C7056, C7057, C7058, and C7061	Semi-volatile
di-n-butyl phthalate	C7033, C7058	Semi-volatile
phenol	C7029	Semi-volatile

- ° Detection limits for semi-volatile target compounds for all samples were substantially greater than indicated.
- ° Concentrations of the following compounds were quantitatively questionable and results were assigned a J (estimated) code.

<u>Compound</u>	<u>Sample(s)</u>
4-methyl-2-pentanone (MIBK)	C7028, C7030, C7032, C7057, C7058, C7059
toluene	C7057, C7058, C7059
pentachlorophenol	C7057, C7058
naphthalene	C7057, C7058

- Concentrations of phenol and 4-methylphenol in aqueous sample C7033 may be substantially greater than indicated by the laboratory and results were appended with a J (estimated) code.

6.2.1.3 Findings

- Large quantities of tributylamine (tentatively identified in GC/MS library as n,n-dibutyl-1-butanamine) were found in several solid and liquid samples. This is the primary organic compound found in aqueous samples C7028, C7029, C7030, and C7032 and solid samples C7057 and C7058. Aqueous sample C7029 was saturated with tributylamine when analyzed at low level. As noted in the laboratory narrative, C7029 was subsequently reanalyzed without standards and with a 10X dilution factor to obtain an estimated concentration value. The estimated tributylamine concentration in the reshoot did not contain the dilution factor and concentrations of tributylamine were approximately ten times that estimated by the laboratory for aqueous sample C7029.
- The following aqueous sample volatile target compounds were questionable because one or more of the aqueous sample field blank, method blank, or laboratory blanks contained the target compound in sufficient quantities to question its presence:

<u>Compound</u>	<u>Sample(s)</u>
methylene chloride	all sample results
acetone	all sample results
2-butanone (MEK)	all sample results
trichloroethene	C7028
toluene	C7030, C7055(1)
vinyl acetate	C7030
trans-1,3-dichloropropene	C7030
4-methyl-2-pentanone (MIBK)	C7055, C7056
trichlorofluoromethane	C7056

- (1) No result was recorded for toluene on the data sheet for C7030. The quantitation value was 18 nanograms, or 72 (ug/l), but the presence of toluene in blanks was sufficient to question this amount.

- The following solid sample volatile target compounds may be questionable because one or more of solid method blanks or field blank C7024 contained the target compound in sufficient quantities to question its presence:

<u>Compound</u>	<u>Sample(s)</u>
methylene chloride	all sample results (1)
acetone	all sample results
2-butanone (MEK)	all sample results
chloromethane	C7059(2)

- (1) The methylene chloride result in sample C7023 was greater than ten times the amount of methylene chloride blank contamination. However, the reviewer still believes this result to be questionable.
- (2) The chloromethane result in sample C7059 was also questionable because of poor spectral matching quality.

ORIGINAL
/Roc

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- The bis-(2-ethylhexyl)phthalate results for aqueous samples C7029, C7033, C7055, and C7056 was questionable since this target compound was found in low and medium level semi-volatile blanks in sufficient quantities to question these results.
- The di-n-butyl phthalate result in aqueous sample C7033 was questionable because di-n-butyl phthalate was noted on the low level semi-volatile blank quantitation list.
- Other phthalate results for solid samples were questioned because phthalate esters are known sampling contaminants.
- Carbon disulfide was reported for aqueous sample C7055, but no spectra was provided and the analyte was crossed off the quantitation list. It was qualitatively questionable, and possibly a transcription error.
- The phenol result of aqueous sample C7029 was questionable due to poor spectral matching quality.
- The phenol and 4-methyl phenol results for aqueous sample C7033 may be substantially greater than indicated by the laboratory. Phenol was a CCC violation and had poor matrix spike recoveries in sample C7033. The spectra for the two acid extractable compounds were satisfactory, and since semi-volatile aqueous analyses sensitivity was poor, they may be present in significantly greater amounts than indicated.
- Diminished quantitative accuracy was suggested for 4-methyl-2-pentanone (MIBK) results for aqueous samples C7028, C7030, and C7032 because instrument response was either saturated or significantly above the calibrated range. The lab attempted to quantify the MIBK results using secondary ions. Samples C7028, C7030, and C7032 were found to contain 34,566 ng., 6,390 ng., and 26,136 ng. respectively. The values found were beyond the linear range of the standards and remain suspect. Volatiles screening, which was not performed, may have revealed the presence of quantities of volatile organic compounds and may have indicated sample dilution would be advisable. These results have been assigned a J (estimated) code in the data summary.
- Diminished quantitative accuracy was suggested for 4-methyl-2-pentanone (MIBK) and toluene results for solid samples C7057 and C7058 because instrument response was either saturated or significantly above the calibrated range. C7057 and C7058 each contained tens of thousands of nanograms of both toluene and MIBK. Volatiles screening was not performed. These results have been assigned a J (estimated) code in the data summary.
- The toluene and 4-methyl-2-pentanone results for solid sample C7059 were quantitatively and qualitatively questionable because of possible chromatographic ghosting and contamination from the samples previously run, C7057 and C7058. All samples were run on an autosampler. There were no blanks run in between to demonstrate contaminant-free conditions. These results have been assigned a J (estimated) code in the data summary.

ORIGINAL
(Recd)

Site Name: American Viscose/FMC
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- ° The pentachlorophenol and naphthalene results in solid samples C7057 and C7058 have been assigned a J (estimated) code in the data summary. The two samples are field duplicates, but sample results are somewhat different. Quantitative accuracy was questioned by deficiencies detailed later in the QA review under the finding concerning detection limits for semi-volatile solid sample analyses.
- ° Volatiles analyses of aqueous samples contained the following deficiencies:
 - (A) Twenty-three of thirty-nine volatiles surrogates were outside QC limits. The laboratory believed the internal standard solution had evaporated.
 - (B) Ten of ten volatiles matrix spike and matrix spike duplicate recoveries exceeded QC limits. None of the Relative Percent Difference (RPD) calculations exceeded QC criteria.
 - (C) BFB tune abnormalities were noted. The tune of 10:29 on 6/20/84 had subtracted 20% of scan #901 -- and the analyst notes "subtracting some column bleed." The tune of 2:56 on 6/20/84 has different values on the quantitation list than stated on the BFB cover sheet. The ion abundance of mass 96 is 9.06% base peak, slightly exceeding the QC criteria of (5-9%).
- ° Volatiles analyses of solid samples contained the following deficiencies:
 - (A) Volatiles analyses holding times were greatly exceeded by the laboratory performing the solids analyses. The original VOA analyses were performed on 7/16/84, 33 days after sample receipt. The VOA reruns were performed on 9/5/84, nearly three months after sample receipt. All rerun results were considered quantitatively and qualitatively questionable. Rerun results compared poorly with initial analyses and were not included on the Data Summary.
 - (B) Two Systems Performance Check Compounds (SPCC) violations occurred and were not corrected. 2-(chloroethyl)vinyl ether was a SPCC violation in the check standard for both the original and rerun analyses.
 - (C) No three-point calibration standards raw data was included for either the original or rerun analyses. Response factors for the initial calibrations were provided, but there were no chromatograms or quantitation lists to verify the response factors. Two sets of check standard data were provided.
 - (D) In the original analyses 8 of 36 volatile surrogate recoveries were outside QC limits. In the rerun analyses 3 of 15 volatiles surrogate recoveries were outside QC limits, indicating possible sample matrix problems. Sample C7058 was not repeated for the volatiles fraction as required due to "insufficient sample."

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- ° Detection limits for semi-volatile target compounds for aqueous samples were substantially greater than indicated by the laboratory performing the aqueous analyses for the following reasons:

- (A) Semi-volatile aqueous standards contained uncorrected System Performance Check Compound (SPCC) and Calibration Check Compound (CCC) violations as noted below. (X) indicates a violation.

<u>Compound</u>	<u>Type of Check</u>	<u>Standard(s)</u>										
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
phenol	CCC		X	X	X	X	X	X	X	X	X	
1,4-dichlorobenzene	CCC											X
N-nitroso-di-n-propylamine	SPCC											
2-nitrophenol	CCC		X	X	X	X	X	X	X	X	X	
2,4-dichlorophenol	CCC		X	X	X	X	X	X	X	X	X	
hexachlorobutadiene	CCC			X	X							
4-chloro-m-cresol	CCC		X		X	X	X	X	X	X	X	
hexachlorocyclopentadiene	SPCC		X		X	X	X	X	X			
2,4,6-trichlorophenol	CCC			X	X	X	X	X	X	X	X	
acenaphthene	CCC									X	X	
2,4-dinitrophenol	SPCC	X	X	X	X	X	X	X	X			
4-nitrophenol	SPCC						X	X	X			
diphenylamine	CCC		X									
pentachlorophenol	CCC		X		X	X	X	X	X	X	X	
fluoranthene	CCC											
benzidine	SPCC		X									
di-n-octyl phthalate	CCC		X				X		X			
benzo(a)pyrene	CCC		X	X	X	X	X	X	X			

*1 = initial semi-volatiles calibration (7/10/84)

2 = Check Standard AB50S727B (17:33, 7/27/84)

3 = Check Standard AB50S727C (00:16, 7/28/84)

4 = Check Standard AB50S730A (08:47, 7/30/84)

5 = Check Standard AB50S731A (18:28, 7/31/84)

6 = Check Standard AB50S731B (01:36, 8/1/84)

7 = Check Standard AB50S83A (13:40, 8/3/84)

8 = Check Standard AB50S83B (20:58, 8/3/84)

9 = Check Standard AB50S813A (18:50, 8/13/84)

10 = Check Standard AB50S813B (01:02, 8/14/84)

*11 = initial semivolatiles calibration (8/9/84) (No SPCC violations noted)

* SPCC checks only apply.

- (B) Five fused silica capillary column checks (FSCC) from semi-volatile Check Standard Standards, were included. One passed the response factor criteria for pentachlorophenol. This was the (FSCC) from standard AB50S813A, run 8/13/84, days after the analytical run. Two check standards did not observe 50 nanograms of pentachlorophenol and two check standards had a pentachlorophenol response factor calculated to be below the required minimum value of 0.05.

- (C) DFTPP tune violations were noted. Two DFTPP tunes have question marks beside masses below mass 69, indicating the instrument was not calibrated with FC43 below the base mass of 69. This was a serious occurrence. The instrument had no accurate measure of mass for low molecular weight ions. Part of the mass range required, from masses 40 to 69, was not defined correctly. The tune at 16:57 on 7/27/84 had an ion abundance for mass 197 outside QC criteria. All 3 DFTPP tunes contained differences between the quantitation list and cover sheets.
- (D) Significant matrix spike and matrix spike duplicate recovery problems occurred. Both the low level aqueous and medium level aqueous semi-volatile matrix spikes had recoveries outside of QC limits for 12 of 14 base/neutral compounds and 4 of 10 acid-extractable compounds. Two acid-extractable compound pairs had Relative Percent Difference (RPD) in matrix spike recoveries outside of QC criteria in both the low and medium level matrix spikes.
- (E) The same low level detection list was submitted for both the low and medium level semi-volatile analyses of aqueous samples. The laboratory ran samples C7028, C7030, and C7032 at medium level after positive screening, but found no target compounds at medium level and claimed low level detection limits. Tributylamine was found in significant levels in samples C7028, C7030, and C7032, and its presence was probably the reason medium level analyses were required. There was no extraction log. It was uncertain what volumes were extracted, and what actual detection limits were, though they are substantially higher than claimed for aqueous samples C7028, C7030, and C7032.
- (F) Nine of forty-two low level aqueous semi-volatile surrogate recoveries and four of thirty-six medium level aqueous semi-volatile surrogate recoveries were outside of QC limits.
- ° Detection limits for semi-volatile compounds for solid samples were substantially greater than reported by the laboratory, and all quantitation for semi-volatile target compounds in solid samples may be questionable because:
- (A) No semi-volatile surrogates were included on the semi-volatile quantitation list, so surrogate recovery could not be verified.
- (B) In the initial analyses, the lab reports 14 of 72 surrogates outside QC limits, and 13 are acid extractable compounds. In the rerun analyses, 0 of 18 surrogates are outside QC limits. There was "insufficient sample" to reanalyze the semi-volatile fraction of C7023 or C7058.
- (C) Target compound calculations cannot be verified by the reviewer.
- (D) No FSCC calibration checks were performed.

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- (E) Significant matrix spike and matrix spike duplicate deviations occurred. No 2,4-dinitrotoluene was recovered in either spike, and this analyte was also a blank contaminant. Four other base-neutral pairs had Relative Percent Differences (RPD) exceeding QC criteria. Eight of ten acid recoveries were outside QC limits and four of five acid-extractable pairs exceeded (RPD) QC criteria.
- (F) No three-point calibration standards raw data was included for either the original or rerun analyses. Response factors for the initial calibrations were provided, but there were no chromatograms or quantitation lists to verify the response factors. Benzidine was not observed on the quantitation list of the check standard at 1:51 on 7/14/84, but it has a response factor on the Calibration Check Compound (CCC) sheet and was not observed in the initial analyses semi-volatile calibration or any initial analyses check standard.
- ° All aqueous sample positive pesticide results were deleted from the data summary and were questioned for the following reasons:
 - (A) Of the three aqueous pesticide hits above laboratory detection limits; dieldrin and alpha-endosulfan in sample C7028 and p,p'-DDE in sample C7032, none were confirmed by second column analyses. Samples C7028 and C7032 were field duplicates, but pesticide analyses results were dissimilar. Sample C7032 had poor dibutylchloroendate surrogate recovery.
 - (B) No pesticide confirmations by second column analyses were performed on pesticide hits below detection limits. Second column confirmations were only performed on sample C7028 (75% fraction) and C7032 (6% fraction). No additional fractions for these or any other samples had pesticide confirmation analyses. Two data sheets for pesticides were presented for samples with pesticide confirmation analyses, one data sheet per column.
 - (C) The p,p'-DDE results in samples C7028, C7029, C7032, C7033, and C7055 were questionable because a peak of similar retention time and sufficient magnitude was in the capillary column pesticide blank run. The peak area of p,p'-DDE in sample C7055 cited was below the minimum peak area of the integrator and was meaningless. Pesticide quantitations were based on capillary column data rather than packed column data.
 - (D) The p,p'-DDD result in sample C7033 was questionable because a peak of similar retention time and sufficient magnitude was found in the capillary column pesticide blank.
 - (E) Aqueous sample C7029 contained an apparent quantitative transcription error for the endosulfan sulfate result. A value of 0.052 ug/l was calculated, but a value of 0.02 K ug/l was reported. This result was not confirmed by second column analyses.

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- (F) Dibutylchloroendate surrogate was recovered in the 75% elution fraction. There was no surrogate for retention time marker or recovery measure in the 6% fraction in this procedure.
 - (G) In sample C7028, alpha-endosulfan was calculated from the 75% list. However, EPA Method 608 for Pesticide Analyses states alpha-endosulfan divides between the 6% and 15% fractions, with 37% alpha-endosulfan recovered in the 6% fraction. However, the alpha-endosulfan result was not confirmed by second column analyses. EPA method 608 defines 6%, 15%, and 50% ethyl ether in hexane fractions, but no 75% fractions.
- ° All solid sample positive pesticide results were questioned for the following reasons:
- (A) Pesticide analyses are not reported from packed column results but instead are quantified from capillary column results. No dibutylchloroendate surrogate was added to packed column analyses. There was no second column method blank.
 - (B) Pesticide results for solid samples C7057 and C7058 were noted as confirmed by two columns. However, all confirmation analyses results were crossed off the second column quantitation lists. The quantitation lists of sample C7057 did not confirm aldrin or dieldrin. The quantitation lists of C7058 did not confirm aldrin or alpha-BHC. Noting these compounds as confirmed on the data sheet is a transcription error.
 - (C) Extensive interferences, including pentachlorophenol, phthalate esters, and other organic compounds were noted in samples C7057 and C7058.
 - (D) High pesticide values were not confirmed by (GC/MS). Aldrin was not found in the semi-volatile analyses, though it was listed as an entry of the semi-volatile quantitation list.
 - (E) Sample C7062 had a capillary column quantitation list with 16 target pesticides and none were crossed off. A chromatogram for second column analyses was included, but with no accompanying quantitation list. No pesticides were listed as found on the sample data sheet for C7062.
 - (F) The beta-BHC result in sample C7085 was questioned because of the presence in the second method blank, QC 1877, of a peak of similar retention time and sufficient magnitude. All other target pesticides found in C7057 and C7058 has peaks of similar retention time present in pesticide method blanks, but blank peaks were of much smaller magnitude.
 - (G) No data was include for a second pesticide matrix spike on solid sample C7023.

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- ° The laboratory performing the solids analyses did not screen any fraction. The laboratory performing the aqueous analyses screened only the semi-volatile fraction.
- ° Field blank C7024 for the solids analyses was an aqueous sample. This was not appropriate. The reviewer has asked Project Officer Joan Fisk about the submission of aqueous samples for solids analyses blanks. She says sample collectors will be notified not to submit such blanks.

6.2.1.4 Summary

This Quality Assurance Review has identified the following areas of concern; blank contamination, poor spectral matching quality, transcription errors, inadequate matrix spike and surrogate recoveries, inappropriate and deficient calibration and check standards, quantification of target compounds beyond the range of standards, BFB and DFTPP tuning deviations, and deficient pesticide analyses.

Please see the accompanying support documentation appendix for specifics on this Quality Assurance Review.

Report prepared by Charles S. Sands, Jr.: _____ Date: _____
(301) 224-2740, FTS 922-3752

01/25/84
RAC

Site Name: American Viscos/FMC
TDD No.: F3-8405-23

6.2.2 Inorganic Data Lab Case 2907

6.2.2.1 Introduction

The findings offered in this report are based upon a review of all available sample data, blank results, matrix spike and duplicate analysis results, ICP interference QC, calibration data, and quality assurance documentation.

6.2.2.2 Qualifiers

It is recommended that this data package be utilized only with the following qualifier statements:

- The results which may be qualitatively questionable are listed below:

<u>Constituent</u>	<u>Samples With Questionable Results</u>
Aluminum	MC3946, MC3948, MC3949
Chromium	MC3946, MC3947, MC3948, MC3949, MC3950, MC3951, MC3955, MC3956, MC3957, MC3958
Silver	MC3948, MC3951, MC3954, MC3956, MC3957, MC3958, MC3959

- The aforementioned results were designated questionable since there is evidence to doubt the presence of these constituents at any concentration less than or equal to the levels reported. However, it can be assumed that concentrations significantly greater than the levels reported for these samples cannot be present.

6.2.2.3 Findings

- Field blank analysis revealed the presence of aluminum, chromium, and silver at levels sufficient to question the aforementioned sample results for these parameters.

6.2.2.4 Summary

This Quality Assurance Review has identified the following area of concern; field blank contamination.

Please see the accompanying support documentation appendix for specifics on this Quality Assurance Review.

Report prepared by Debra K. White: _____ Date: 8/1/84

ORIGINAL
(Red)

SECTION 7

7.0 TOXICOLOGICAL EVALUATION

7.1 Summary

The most apparent potential hazards posed by the contaminants identified on this site are the possible contamination of local domestic wells and the contamination of the Juniata River. Local groundwater is used to supply drinking water to some area residents. The Juniata River is used for recreational purposes.

Several organic compounds including benzene(s), phenol(s), chlorinated aliphatics, a ketone, and naphthalene, and elevated levels of numerous metals were measured in samples from containments into which wastewater was formerly discharged when the facility was active. Some of the pollutants are recognized (benzene, arsenic) or suspect (chlorinated aliphatics) human carcinogens. The identified contaminants could potentially infiltrate the groundwater through the unlined storage basins and possibly degrade local domestic well water or be washed into the Juniata River following heavy precipitation. The elevated levels of metals noted in on-site samples could adversely affect aquatic life in the river in the event of heavy runoff, flooding, or possibly groundwater infiltration.

Due to the absence of monitoring wells on site, there was no information available regarding groundwater quality. There was no available information concerning the status of the water in area wells or in the Juniata River.

Sampling by the Pennsylvania Department of Environmental Resources (PA DER), 3 months prior to the FIT III investigation, also identified volatile organics in samples from 1 of the containments.

7.2 Support Data

7.2.1 Distribution of Contaminants

Elevated levels of several metals were measured in on-site surface water and sediment samples. The results are summarized in the table on the next page. Duplicate samples were taken from the mill race. Only the higher of the 2 values is listed. When the site was active, wastewater flow was from the mill race to the settling basins to the storage basins.

		<u>Mill Race</u>	<u>Settling Basins</u>	<u>Storage Basins</u>
aluminum	aqueous	-	-	25,200 ug/l
antimony	aqueous	-	30.0 ug/l	90.0 ug/l
	sediment	6.8 mg/kg	1.9 mg/kg	6.1 mg/kg
arsenic	aqueous	-	-	42 and 54 ug/l
	sediment	26.3 mg/kg	-	-
barium	aqueous	-	138 and 152 ug/l	266 and 841 ug/l
	sediment	1,150 mg/kg	-	-
cadmium	aqueous	-	-	13 and 21 ug/l
	sediment	7.9 mg/kg	5.3 and 6.1 mg/kg	1.2 and 12.2 mg/kg
copper	aqueous	-	107 and 274 ug/l	137 and 212 ug/l
	sediment	3,000 mg/kg	62.7 and 150 mg/kg	56.9 mg/kg
iron	aqueous	3,530 ug/l	1,710 and 5,770 ug/l	98,200 and 108,000 ug/l
lead	aqueous	-	-	525 ug/l
	sediment	395 mg/kg	105 and 300 mg/kg	485 mg/kg
manganese	aqueous	-	-	1,250 and 1,710 ug/l
mercury	aqueous	1.4 ug/l	0.5 and 0.6 ug/l	1.6 ug/l
nickel	aqueous	-	-	73 ug/l
selenium	aqueous	-	13 ug/l	-
	sediment	1.35 mg/kg	1.15 mg/kg	-
silver	sediment	88.5 mg/kg	20.8 mg/kg	-
thallium	aqueous	16 ug/l	-	-
zinc	aqueous	282 ug/l	418 ug/l	3,490 and 9,880 ug/l
	sediment	3,220 mg/kg	3,970 and 19,440 mg/kg	1,720 mg/kg

Arsenic (27.5 mg/kg), cadmium (9.4 mg/kg), lead (390 mg/kg), and zinc (26,400 mg/kg) were also increased in an auger sample from sludge basin 4. Cyanide was identified in sediment samples from the mill race (3.5 mg/kg) and settling basin no. 2 (3.25 mg/kg).

A few organic priority pollutants were also identified in on-site surface water samples as follows:

		<u>Mill Race</u>	<u>Settling Basins</u>	<u>Storage Basins</u>
benzene	aqueous	-	3 ug/l	-
	sediment	111 ug/kg	-	-
ethylbenzene	sediment	273 ug/kg	-	-
toluene	aqueous	820 ug/l	12 ug/l	-
	sediment	*9,970 ug/kg	*133 and 308 ug/kg	-
xylene	sediment	1,180 ug/kg	-	-
phenol	aqueous	-	-	*15 ug/l
4-methylphenol	aqueous	-	-	*33 ug/l
pentachlorophenol	sediment	*35,950 ug/kg	-	-
trichloroethene	sediment	10 ug/kg	-	-
tetrachloroethene	sediment	11 ug/kg	-	9.6 ug/kg
4-methyl-2-pentanone (MIBK)	aqueous	*261,000 ug/l	*25,600 ug/l	-
	sediment	*32,800 ug/kg	*920 ug/kg	-
naphthalene	sediment	4,493 ug/kg	-	-

*Estimated Value

A low concentration of benzene (9.8 ug/kg) was reported in the auger sample from sludge basin 4.

HNU readings recorded on site did not exceed background levels. Odors were noted by the FIT III team around the mill race and settling basins. The water in these basins was dark green/black in color.

Due to the absence of monitoring wells on site, there was no information available regarding the quality of the underlying groundwater.

Previous sampling of the storage basins by PA DER in 1983 revealed contamination with heavy metals. Analysis of samples from the mill race taken in March 1984 identified several volatile organics, including MIBK (176 ppm) and toluene (1.7 ppm), 2 of the organics reported in the FIT III samples. A solvent spill by the Mifflin County Industrial Development Authority (MCIDA) was reported to have occurred in 1981.

7.3.1 Toxicological Considerations

The main areas of toxicological concern regarding contaminants identified on this site are the possible degradation of the groundwater and subsequent pollution of area domestic wells, and the potential pollution of the Juniata River. There are 17 domestic wells and 1 trailer park well serving approximately 158 people within a 3-mile radius of the site. Five of these wells are known to draw water from the same aquifers which underlie the site. The Juniata River, which borders the storage basins to the north and east of the site, is used for recreation.

Although the mill race and settling basins are lined, they are interconnected with each other and with the unlined storage basins. The site has been inactive since 1972. However, PA DER reports that storm water is periodically pumped from the mill race and settling basins into the storage basins. This can potentially flush contaminants in the lined containments into the storage basins, which are in free contact with the underlying soil. The contaminants would then have the potential to infiltrate the groundwater.

On the basis of their octanol/water partition coefficients*, it could be predicted that a number of the identified organic pollutants, including benzene, trichloroethene, tetrachloroethene, toluene, xylenes, ethylbenzene, and naphthalene could infiltrate the groundwater relatively easily.¹ Benzene is a recognized human carcinogen. Trichloroethene and tetrachloroethene have limited evidence of carcinogenicity in animals.² Benzene and elevated levels of arsenic, lead, cadmium, and zinc were identified in the auger sample from storage basin no. 4, suggesting at least a limited movement of on-site contaminants into the underlying soil. Arsenic is a recognized human carcinogen by the oral route; lead is a neurotoxin. The cyanide levels (3.25 and 3.5 mg/kg) in the sediment samples are of no apparent consequence.

Due to the absence of on-site monitoring wells, the status of the underlying groundwater could not be determined. There was also no information available concerning the quality of local domestic well water. The nearest well is reported to be 1/2 mile from the site.

Arsenic, copper, iron, lead, mercury, nickel, and zinc were measured in aqueous samples from the storage basin and/or mill race and settling basins in concentrations that could adversely affect aquatic life.³⁻⁹ Both flora and fauna were noted in the storage basins by the FIT III team. Since this site is located in a flood plain, pollutants in all the containments might be washed directly into the Juniata River following heavy precipitation or flooding conditions. It is also possible that contaminants might reach the river via the groundwater.

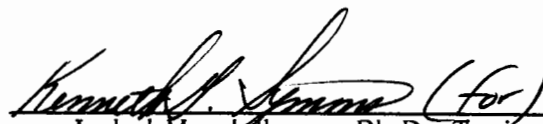
Aquatic toxicity data for the identified organic contaminants is limited. Volatile organics do not tend to persist in surface waters.

*Ratio of a substance's solubility in octanol to its solubility in water.

Although the site has been closed down, access to the site is not restricted. Dermal contact with contaminated surface waters or sediments would probably result in the absorption of only very small amounts of contaminants and would accordingly be expected to pose a very small health risk.

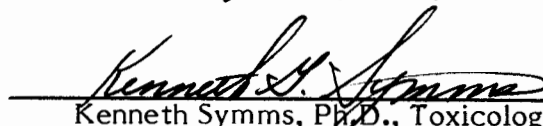
HNU readings did not exceed background, although odors were detected on site. It is possible that some priority contaminants may be present in the ambient air in ppb concentrations, which could be of toxicological concern if chronically inhaled. There are no known populations that regularly come into contact with the on-site pollutants via inhalation or dermal contact.

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LIST OF SOURCES

1. Schwarzenbach, R.P., et al. 1983. Behavior of organic compounds during infiltration of river water to groundwater. Field studies. Environ. Sci. Technol. 17:472.
2. Federal Register, June 12, 1984. Environmental Protection Agency, National Primary Drinking Water Regulations: Volatile Synthetic Organic Chemicals; Proposed Rulemaking. 49 (114): 24330.
3. U.S. Environmental Protection Agency. 1984. Revised Section B of Ambient Water Quality Criteria for Arsenic.
4. U.S. Environmental Protection Agency. 1984. Revised Section B of Ambient Water Quality Criteria for Copper.
5. U.S. Environmental Protection Agency. 1976. Quality Criteria for Water. U.S. Government Printing Office NNo. 055-001-01049-4.
6. U.S. Environmental Protection Agency. 1984. Revised Section B of Ambient Water Quality Criteria for Lead.
7. U.S. Environmental Protection Agency. 1984. Revised Section B of Ambient Water Quality Criteria for Mercury.
8. U.S. Environmental Protection Agency. 1980. Ambient Water Quality Criteria for Nickel (Office of Water Regulations and Standards). EPA PB81-117715.
9. U.S. Environmental Protection Agency. 1980. Ambient Water Quality Criteria for Zinc (Office of Water Regulations and Standards). EPA PB81-117897.